

Serrinha Nucleus Granites, BA-Brazil: an Overview

¹ RIOS, D.C.; ² CONCEICAO, H. – 1. Bolsista CAPES/GPA/CPGG/UFBA, Royal Ontario Museum, Toronto, Canada, deborar@rom.on.ca; 2. Bolsista CNPq/GPA/CPGG/UFBA, Geochemistry Department, Salvador, Brazil. herbet@cpgg.ufba.br.

The Bahia State Paleoproterozoic rocks are arranged in three nuclei: Guanambi (west); Remanso (central) and Serrinha (SN – east), separated by mobile belts that mark collisional zones. In SN, Archean migmatic-gneiss rocks are the basement of two Paleoproterozoic volcano-sedimentary sequences (Capim Group and Itapicuru River Greenstone Belt). The youngest episode of plutonism in Bahia occurred during the Transamazonian, when SN terranes were intruded several times by granitic magmas. These granitic rocks are classified as pre/sin-tectonics (G1,G2,G3) and late/post-tectonics (G4,G5). North-south elongated bodies with gneissic borders and isotropic cores characterize the pre/sin-tectonic group. Compositionally they vary from low (G1) to high (G3) potassium, with calc-alkalines signatures. Small (<35km²) potassic-alkalines massifs, with oval-circular shapes, isotropic textures and magmatic flux-foliation represent the late/post-tectonic group. They evolve from shoshonitic, potassic/ultrapotassic rocks (G4) to biotite-alkaline granites (G5). Lamprophyres (voguesites/minettes) are described in association with G4 group.

Geochronological dates illustrate that the generation of Itapicuru basin is limited to 100 Ma (2.2 - 2.1 Ga.). The plutonism occurs in the same period (2.2 to 2.0 Ga.) and the gold mineralization is dated between 2.08-2.03 Ga. (K/Ar) as G4 granites.

The actual data make possible to explain the tectonic context of SN like a volcanic-arc with subduction related magmatism been re-established up a foundation of older arc rocks (G1), where the gold mineralization is temporal and spatially associated with alkalines terms of this magmatism. GPA's contribution 069.